

22463

11920

3 Hours / 70 Marks

Seat No.

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- Instructions* – (1) All Questions are *Compulsory*.
(2) Illustrate your answers with neat sketches wherever necessary.
(3) Figures to the right indicate full marks.
(4) Assume suitable data, if necessary.
(5) Use of Non-programmable Electronic Pocket Calculator is permissible.

Marks

- 1. Attempt any FIVE of the following. **10****
- a) List four methods of fabric forming system.
 - b) Define
 - (i) Course
 - (ii) Wales
 - c) List three types of stitches used in Knitting.
 - d) Draw the loop diagram of 1×1 rib structure.
 - e) Draw loop diagram of 1×1 Purl structure.
 - f) Explain the term used in warp knitting.
 - (i) Overlap
 - (ii) Under lap
 - g) List four defects commonly observed in knitted fabric.

P.T.O.

2. Attempt any THREE of the following. 12

- a) Draw diagrammatic notation 1×1 Inter lock structure and state 4-characteristics of the same.
- b) State the features of single jersey knitting m/c.
- c) Explain the function of following knitting elements.
 - (i) Creel
 - (ii) Feeder
 - (iii) Cylinder
 - (iv) Needle
- d) Compare the weaving and knitting process based on
 - (i) Yarn twist
 - (ii) Structure of fabric.
 - (iii) Properties of fabric.
 - (iv) Form of Raw material.
 - (v) Machines used.
 - (vi) Principle of fabric.
 - (vii) Fabric width.
 - (viii) Application of fabric.

3. Attempt any THREE of the following. 12

- a) Give the reasons for growth of knitting industry.
- b) Give chain link notation of guide bars of the following warp knitted structure.
 - (i) Pillar
 - (ii) Tricot
- c) State the features of flat knitting machine with neat sketch.
- d) Draw symbolic and diagrammatic notation for 1×1 Rib structure.

4. Attempt any THREE of the following. 12

- a) Explain knitting cycle of latch needle with the help of diagram.
- b) Determine Stitch length in "mm" from following data
 - (i) Wales per inches = 40
 - (ii) Extended length of 40 wales = 8 cm
- c) Describe the working of guide bar w.r.t.
 - (i) Objectives of guide bar
 - (ii) Type of movement
 - (iii) Type of threading
 - (iv) Guide bar movement representation.
- d) Calculate the production of knitting m/c in yds / hour and pounds per hour from following data.
 - (i) No of feeders - 30
 - (ii) RPM of m/c - 20
 - (iii) Stitch length - 3.5 mm
 - (iv) No of Needles in m/c - 700
 - (v) Efficiency - 80%
 - (vi) Count of yarn - 30^s Ne
 - (vii) CPI (Course per inch) - 24
- e) Define the terms with figure.
 - (i) Stitch length.
 - (ii) Course length.
 - (iii) Needle loop.
 - (iv) Sinker loop.

- 5. Attempt any TWO of the following.** **12**
- a) Determine the method of calculating stitch length.
 - b) Describe the functions of following elements on tricot warp knitting m/c
 - i) Guide bar
 - ii) Shinker bar
 - iii) Pattern wheel
 - iv) Chain link
 - c) Explain the method to represent warp knitted structure on paper.
- 6. Attempt any TWO of the following:** **12**
- a) Determine the fabric weight in gm / mt² from given data
 - (i) WPI - 40
 - (ii) CPI - 40
 - (iii) Yarn Count - 30 NC
 - (iv) Stitch length - 3 mm
 - b) Draw the lapping diagram for following chain notation.
 - i) 1-0 / 1-2 // ii) 2-1 / 3-4 //
 - c) Compare between Rib and Single jersey fabric.
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